AZIMUTH BY ALTITUDE METHOD

For use of this form, see FM 3-34.331; the proponent agency is TRADOC.

NORTH ↑ OBSERVER

PROJECT	LOCATION		
ORGANIZATION	LATITUDE	LONGITUDE	STATION
MARK	INSTRUMENT *(Number and type)*		STANDARD TIME *(Meridian)*
CELESTIAL BODY(S)	WATCH FAST (-) SLOW (+)		WATCH COMPARED *(Time)*
DATE *(YYYYMMDD)*	OBSERVER		WEATHER

	SET NR 1						SET NR 2						SET NR 3					
	HOR. ANGLE			VERT. ANGLE			HOR. ANGLE			VERT. ANGLE			HOR. ANGLE			VERT. ANGLE		
Mean	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″
Parallax																		
Mean refraction																		
h (sum)																		
	HRS.	MIN.	SEC.				HRS.	MIN.	SEC.				HRS.	MIN.	SEC.			
Mean time																		
Watch correction																		
TZC																		
Universal time (UT)																		
δ at O^h UT ±	°	′	″				°	′	″				°	′	″			
UT X d var. per hr. ±																		
δ ±																		
h																		
ϕ ±																		
Sin δ ±																		
Sin h +																		
Sin ϕ +																		
Cos h ±																		
Cos ϕ ±																		
Cos A ±																		
A (E or W)	°	′	″				°	′	″				°	′	″			
Azimuth of S																		
Angle, Mark to S −																		
True Az. to Mark																		
Mean true azimuth to Mark	°	′	″															
Grid correction																		
Grid azimuth																		
Mag. azimuth to Mark																		
Mag. declination																		

$$\text{Cos A} = \frac{\sin \delta - \sin h \sin \phi}{\cos h \cos \phi}$$

Computation = Three sets are computed separately for check, refraction and parallax corrections as obtained from FM 3-34.331. Apply watch correction to observed mean time. TZC = time zone correction to universal time.

δ = declination, (+) if north, (-) if south. h = altitude. ϕ = latitude, (+) if north, (-) if south.
A = Astronomic azimuth east or west of north. If cos A is (-), A is between 90° and 180° .

COMPUTED BY	DATE *(YYYYMMDD)*	CHECKED BY	DATE *(YYYYMMDD)*